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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/970,921	10/05/2001	Frank Michiels	2428-0108P	3231

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EXAMINER
FOX, DAVID T

ART UNIT	PAPER NUMBER
1638	

DATE MAILED: 09/26/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

FILE COPY

Office Action Summary	Application No.	Applicant(s)	
	09/970,921	MICHIELS ET AL.	
	Examiner	Art Unit	
	David T. Fox	1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 June 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. *09/068,101* .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Applicants' amendments of 26 June 2003 have overcome the objection to claim 9.

Claims 1-14 remain rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of U.S. Patent No. 6,372,960. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the reasons presented in the last Office action on page 2.

Applicants have indicated in the amendment of 26 June 2003 that they filed a Terminal Disclaimer accompanying that amendment. Unfortunately, that Terminal Disclaimer was either not received by the Office, or was misplaced prior to forwarding the application to the Examiner. Applicants are requested to file another copy of the Terminal Disclaimer.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-6 (newly amended) are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2-6 are indefinite in their recitation of "said barstar DNA" which lacks antecedent basis in newly amended claim 1.

Claims 1-2 and 7-14 remain rejected under 35 U.S.C. 103(a) as being unpatentable over EP 412,911 (PLANT GENETIC SYSTEMS) taken with Koziel et al (1993) and Hartley (1993), as stated on pages 4-5 of the last Office action.

Claims 3-6 remain free of the prior art, as stated on page 5 of the last Office action.

No claim is allowed.

Applicants' arguments filed 26 June 2003 have been fully considered but they are not persuasive.

Applicants urge that the obviousness rejection is improper, given the lack of motivation to alter the A-T content of the barstar gene taught by PLANT GENETIC SYSTEMS which is already in the plant-optimal range of 50%, the failure of Koziel et al to suggest the modification of any gene other than the *Bacillus thuringiensis* endotoxin gene for expression in corn, the failure of any reference to suggest the improvement of the ability of barstar to inhibit barnase, and the ability of Applicants to obtain increased barstar expression in three different species as demonstrated in Examples 4-6.

The Examiner maintains that it is well known in the art that corn and other monocots have a higher requirement for G-C usage than dicots, as stated on page 5 of the last Office action, top paragraph. Thus, one of ordinary skill in the art would have been motivated to modify the G-C content of any transgene for expression in monocots such as corn of Example 4 or rice of Example 5. It is noted that the claims are not limited to a process for the expression of barstar in dicot plants only.

Regarding the improved inhibition of barnase, one of ordinary skill in the art would have recognized that the increased expression of the barstar gene, due to the codon modification above, would have resulted in the production of more barstar protein which would be able to bind to more of the barnase protein, thus inherently resulting in higher inhibition of barnase. One of ordinary skill in the art would have recognized that such higher inhibition of barnase would have been desirable, to better and more completely control the restoration of male fertility for the maintenance of the male sterile genotype, i.e. to produce more male fertile plants for the ultimate reproduction of more male sterile ones.

Furthermore, it is noted that Applicants' evidence of unexpected results, namely improved barnase inhibition, depends upon the use of dicot species such as oilseed rape of Example 6, and the use of particular modified sequences of SEQ ID NO:5. In contrast, the claims are broadly drawn to any DNA comprising any sequence which is merely characterized by its A-T content, and a process for its use to enhance barnase inhibition in any plant.

See In re Lindner, 173 USPQ 356 (CCPA 1972) and In re Grasselli, 218 USPQ 769 (Fed. Cir. 1983) which teach that the evidence of nonobviousness should be commensurate with the scope of the claims.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David T. Fox whose telephone number is (703) 308-0280. The examiner can normally be reached on Monday through Friday from 10:30AM to 7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson, can be reached on (703) 306-3218. The fax phone number for this Group is (703) 872-9306. The after final fax phone number is (703) 872-9307.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

September 22, 2003

DAVID T. FOX
PRIMARY EXAMINER
GROUP ~~180~~ 1638